

CONTENTS

Number 1: July 1973

Original Articles

- AN EXPANDED INDICATION FOR CORONARY SURGERY 1
W. Dudley Johnson, M.D., and Kenneth L. Kayser, P.E.
- ACUTE TRAUMATIC RUPTURE OF THE AORTA: A REEMPHASIS OF REPAIR WITHOUT A VASCULAR PROSTHESIS 7
Edwin C. McGough, M.D., and Richard K. Hughes, M.D.
- SURGICAL MANAGEMENT OF COEXISTING CORONARY ARTERY DISEASE AND IDIOPATHIC HYPERTROPHIC SUBAORTIC STENOSIS 11
E. Oran, M.D., S. Gupta, M.D., B. Yeo, M.D., J. Amari, M.D., J. Lauterstein, M.D., R. Potter, M.D., and V. A. Piccone, M.D.
- VASCULAR INJURY FOLLOWING HEART VALVE REPLACEMENT 19
Lloyd L. Black, M.D., R. John McComb, B.D.S., and Malcolm D. Silver, M.D.
- RECONSTRUCTION OF THE MITRAL VALVE 30
Bruno J. Messmer, M.D., Karl Gattiker, M.D., Martin Rothlin, M.D., and Ake Senning, M.D.
- EXTRACORPOREAL CIRCULATION IN HYPOTHERMIA AS USED FOR TOTAL-BODY WASHOUT IN STAGE IV HEPATIC COMA 44
Robert E. Cline, Lt Col, Gerald Klebanoff, Col, Raymond G. Armstrong, Lt Col, and William Stanford, Col, all MC, USAF
- RECENT ADVANCES IN THE OPERATIVE MANAGEMENT OF MASSIVE CHEST TRAUMA 52
George J. Reul, Jr., M.D., Kenneth L. Mattox, M.D., Arthur C. Beall, Jr., M.D., and George L. Jordan, Jr., M.D.
- ACUTE DIAPHRAGMATIC INJURIES 67
John A. Drews, M.D., Elliott C. Mercer, M.D., and John R. Benfield, M.D.
- DIAGNOSTIC THORACOSCOPY 79
Paul T. DeCamp, M.D., Patterson W. Moseley, M.D., Meredith L. Scott, M.D., and Hurst B. Hatch, Jr., M.D.

THE USE OF AUTOMATIC STAPLING DEVICES IN
PULMONARY RESECTION 85

*R. Maurice Hood, M.D., Thomas D. Kirksey, M.D., Jim H. Calhoun, M.D.,
Homer S. Arnold, M.D., and Robert S. Tate, M.D.*

How to Do It

TRANSAORTIC REPAIR OF VENTRICULAR SEPTAL DEFECT 99

*Denton A. Cooley, M.D., Grady L. Hallman, M.D., Don C. Wukasch, M.D.,
and Frank M. Sandiford, M.D.*

Editorial

HOW MANY CARDIAC SURGICAL PROGRAMS? 102

Watts R. Webb, M.D.

Correspondence 104

Leroy Hyde, M.D.

Eugene G. Laforet, M.D.

John S. Wright, F.R.A.C.S.

Joshua Lynfield, M.D.

Review of Recent Books 109

Notice from the American Board of Thoracic Surgery 10

Notice from the Southern Thoracic Surgical Association 98

Notice from The Society of Thoracic Surgeons 110

Number 2: August 1973

Original Articles

THE AORTA-TO-CORONARY RADIAL ARTERY BYPASS GRAFT:
A TECHNIQUE AVOIDING PATHOLOGICAL CHANGES IN GRAFTS 111

*Alain Carpentier, M.D., J. L. Guermontprez, M.D., A. Deloche, M.D.,
Claude Frechette, M.D., and Charles DuBost, M.D.*

REOPERATION AFTER INSERTION OF AORTIC HOMOGRAFT AS A
RIGHT VENTRICULAR OUTFLOW TRACT 122

Gideon Merin, M.D., and Dwight C. McGoon, M.D.

INITIAL EXPERIENCE WITH A SUTURELESS, SCREW-IN ELECTRODE
FOR CARDIAC PACING 127

Kamal A. Mansour, M.D., William H. Fleming, M.D., and Charles R. Hatcher, Jr., M.D.

RIGHT-SIDED BACTERIAL ENDOCARDITIS: NEW CONCEPTS IN
THE TREATMENT OF THE UNCONTROLLABLE INFECTION 136

*Agustin Arbulu, M.D., Ali Kafi, M.D., Norman W. Thoms, M.D., and
Robert F. Wilson, M.D.*

THYMOMA 141

D. Weissberg, M.D., M. Goldberg, M.D., and F. G. Pearson, M.D.

PERORAL ESOPHAGEAL INTUBATION FOR OBSTRUCTIVE
CARCINOMA OF THE ESOPHAGUS 148

*Ralph J. Lewis, M.D., Philip J. Kunderman, M.D., Glenn E. Sisler, M.D.,
and James W. Mackenzie, M.D.*

GROWTH OF TRACHEAL ANASTOMOSES: AN EXPERIMENTAL
STUDY IN WEANLING PIGS 158

*D. Alton Murphy, M.D., Geoffrey L. Dunn, M.D., Norman Poirier, M.D.,
and Maurice Martin*

FLEXIBLE FIBEROPTIC BRONCHOSCOPY 163

*L. Penfield Faber, M.D., David O. Monson, M.D., Joseph J. Amato, M.D.,
and Robert J. Jensik, M.D.*

DIAGNOSIS AND REVERSAL OF REJECTION IN EXPERIMENTAL
AND CLINICAL LUNG ALLOGRAFTS 172

*Frank J. Veith, M.D., Spencer K. Koerner, M.D., Stanley S. Siegelman, M.D.,
Minoru Kawakami, M.D., Stewart Kaufman, M.D., Lavi A. Attai, M.D.,
Jack W. C. Hagstrom, M.D., and Marvin L. Gliedman, M.D.*

RESPIRATORY MONITORING: RECENT DEVELOPMENTS IN
AUTOMATIC MONITORING OF GAS CONCENTRATION, FLOW,
PRESSURE, AND TEMPERATURE 184

*Stephen Z. Turney, M.D., Walter Blumenfeld, B.S., Samuel Wolf, M.S.,
and Robert Denman*

Case Report

REPAIR OF A THROUGH-AND-THROUGH GUNSHOT WOUND OF
THE AORTIC ARCH USING A HEPARINIZED SHUNT 193

Tom R. DeMeester, M.D., John L. Cameron, M.D., and Vincent L. Gott, M.D.

How to Do It

- EXPOSURE OF THE CIRCUMFLEX CORONARY ARTERY 199
J. E. DeMeules, M.D., and L. H. Coffin, M.D.

Current Review

- AORTA-TO-CORONARY ARTERY BYPASS GRAFTING: INDICATIONS AND CONTRAINDICATIONS—AN INTERIM REVIEW 201

Clarence S. Thomas, Jr., M.D., William C. Alford, Jr., M.D., George R. Burrus, M.D., and William S. Stoney, M.D.

- Notice from the Southern Thoracic Surgical Association* 162

- Notice from The Society of Thoracic Surgeons* 216

Number 3: September 1973

Original Articles

- PULMONARY EMBOLCTOMY WITH PREOPERATIVE CIRCULATORY SUPPORT 217

Robert L. Berger, M.D.

- DISTRIBUTION OF CORONARY BLOOD FLOW DURING CARDIOPULMONARY BYPASS IN PIGS: POSSIBLE IMPLICATIONS FOR LEFT VENTRICULAR HEMORRHAGIC NECROSIS 228

Ronald M. Becker, M.D., Harry M. Shizgal, M.D., and Anthony R. C. Dobell, M.D.

- THORACIC OUTLET SYNDROME MASQUERADING AS CORONARY ARTERY DISEASE (PSEUDOANGINA) 239

Harold C. Urschel, Jr., M.D., Maruf A. Razzuk, M.D., John W. Hyland, M.D., James L. Matson, M.D., Rolando M. Solis, M.D., Richard E. Wood, M.D., Donald L. Paulson, M.D., and Nicoll F. Galbraith, M.D.

- AORTOCORONARY ARTERY GRAFT DURING EARLY AND LATE PHASES OF ACUTE MYOCARDIAL INFARCTION 249

Chalit Cheanvechai, M.D., Donald B. Effler, M.D., Floyd D. Loop, M.D., Laurence K. Groves, M.D., William C. Sheldon, M.D., and F. Mason Sones, Jr., M.D.

- SURGICAL MANAGEMENT OF THE PREINFARCTION SYNDROME 261

Ernest A. Traad, M.D., Parry B. Larsen, M.D., Thomas O. Gentsch, M.D., Arthur J. Gosselin, M.D., and Paul S. Swaye, M.D.

DOUBLE-CHAMBERED RIGHT VENTRICLE	273
<i>Keith W. Ashcraft, M.D., Quang X. Nghiem, M.D., Akira Nishimura, M.D., and Richard T. Padula, M.D.</i>	
THE CONGENITALLY CLEFT POSTERIOR MITRAL VALVE LEAFLET: AN ANTECEDENT TO MITRAL REGURGITATION	281
<i>M. Terry McEnany, M.D., Terence A. English, F.R.C.S., and Donald N. Ross, F.R.C.S.</i>	
TRACHEAL REGENERATION IN LONG-TERM SURVIVORS WITH SILICONE PROSTHESIS	293
<i>Nicholas J. Demos, M.D., H. Mitnick, M.D., D. McCally, M.D., E. Feinberg, M.D., J. McKeon, M.D., and J. J. Timmes, M.D.</i>	
HIATUS HERNIA WITH AND WITHOUT ESOPHAGEAL STRICTURE: EXPERIENCE WITH THE BELSEY MARK IV REPAIR	301
<i>Raymond J. Donnelly, F.R.C.S., Philip B. Deverall, F.R.C.S., and David A. Watson, F.R.C.S.</i>	
LEIOMYOMA OF THE ESOPHAGUS: A REPORT OF 19 SURGICAL CASES	308
<i>Michael G. Sevetis, M.D., Vicente C. deGuzman, M.D., William S. Lyons, M.D., and Joseph W. Peabody, Jr., M.D.</i>	

Editorial

ANOTHER LOOK AT PULMONARY EMBOLECTOMY	317
<i>Arthur A. Sasahara, M.D., and Ernest M. Barsamian, M.D.</i>	

Announcements

PROGRAM FOR TWENTIETH ANNUAL MEETING OF THE SOUTHERN THORACIC SURGICAL ASSOCIATION	321
<i>Notice from The Society of Thoracic Surgeons</i>	324

Number 4: October 1973

Original Articles

PERCUTANEOUS TRANSVENOUS ENDOMYOCARDIAL BIOPSY IN HUMAN HEART RECIPIENTS: EXPERIENCE WITH A NEW TECHNIQUE	325
<i>Philip K. Caves, F.R.C.S., Edward B. Stinson, M.D., Margaret Billingham, M.B., B.S., and Norman E. Shumway, M.D.</i>	

CORONARY ARTERY SPASM PRODUCING PRINZMETAL'S ANGINA AND MYOCARDIAL INFARCTION IN THE ABSENCE OF CORONARY ATHEROSCLEROSIS: SURGICAL TREATMENT	337
<i>Spencer B. King, M.D., Kamal A. Mansour, M.D., Charles R. Hatcher, M.D., Mark E. Silverman, M.D., and Neil C. Hart, M.D.</i>	
A NEW METHOD FOR INTRAOPERATIVE DETECTION OF INTRACARDIAC AIR PRIOR TO DISCONTINUANCE OF BYPASS	344
<i>S. Borik, B.S., T. B. Davey, M.E., B. Kaufman, M.S., E. A. Smeloff, M.D., and G. E. Miller, Jr., M.D.</i>	
EXTENDED TOTAL CARDIOPULMONARY BYPASS IN PUPPIES	349
<i>Brit Litchford, M.D., Marko Turina, M.D., Marcos Intaglietta, Ph.D., and Nina S. Braunwald, M.D.</i>	
ULTRASONIC "B" SCANNING OF ABDOMINAL ANEURYSMS	361
<i>D. S. Mulder, M.D., F. Winsberg, M.D., C. M. Cole, M.D., P. E. Blundell, M.D., and H. J. Scott, M.D.</i>	
ASCENDING AORTIC ANEURYSMS WITH ASSOCIATED AORTIC REGURGITATION	368
<i>Howald K. Helseth, M.D., John J. Haglin, M.D., Roger R. Stenlund, M.D., Charles R. Peterson, M.D., and David W. Gauger, M.D.</i>	
THE EFFECT OF LEVARTERENOL AND PHENTOLAMINE ON THE HYPERTENSIVE PULMONARY VASCULATURE	375
<i>E. Leon Rhodes, M.D., P. T. O'Rourke, M.D., Robert Lee, B.S., John Straker, B.S., and Marvin M. Kirsh, M.D.</i>	
AORTOCORONARY SAPHENOUS VEIN BYPASS: RESULTS IN 1,492 PATIENTS, WITH PARTICULAR REFERENCE TO PATIENTS WITH COMPLICATING FEATURES	380
<i>Denton A. Cooley, M.D., John T. Dawson, M.D., Grady L. Hallman, M.D., Frank M. Sandiford, M.D., Don C. Wukasch, M.D., Efrain Garcia, M.D., and Robert J. Hall, M.D.</i>	
CORRECTION OF TRANSPOSITION OF THE GREAT ARTERIES IN INFANTS UNDER SURFACE-INDUCED DEEP HYPOTHERMIA	391
<i>S. Subramanian, M.D., and H. Wagner, M.D.</i>	
AORTA-TO-RIGHT PULMONARY ARTERY ANASTOMOSIS CAUSING OBSTRUCTION OF THE RIGHT PULMONARY ARTERY: MANAGEMENT DURING CORRECTION OF TETRALOGY OF FALLOT	402
<i>William A. Gay, Jr., M.D., and Paul A. Ebert, M.D.</i>	

How to Do It

METHOD OF CLOSURE OF THE AORTA-TO-RIGHT PULMONARY ARTERY (WATERSTON) ANASTOMOSIS DURING CORRECTIVE OPERATION	411
<i>C. Peter Clarke, F.R.A.C.S.</i>	

Note

- INSULATED COVERING FOR TEMPORARY PACEMAKER LEADS 414
William Stanford, Col, MC, USAF

Current Review

- PULMONARY HYPERTENSION AND CONGENITAL HEART DISEASE 416
Mark Wertheimer, M.D., James H. Moller, M.D., and Aldo R. Castaneda, M.D.

Editorial

- WIDER APPLICATION OF THE ENDOMYOCARDIAL BIOPSY TECHNIQUE 429
Shigeru Sakakibara, M.D., and Morie Sekiguchi, M.D.

Correspondence

- Robert L. Berger, M.D.* 433

Number 5: November 1973

Original Articles

- INTRAAORTIC BALLOON PUMPING AND EMERGENCY CORONARY
 ARTERIAL REVASCULARIZATION FOR ACUTE MYOCARDIAL
 INFARCTION WITH IMPENDING EXTENSION 435
*Eldred D. Mundth, M.D., Mortimer J. Buckley, M.D., Herman K. Gold, M.D.,
 Willard M. Daggett, M.D., Robert C. Leinbach, M.D., and W. Gerald Austen, M.D.*
- AUGMENTATION AND REDISTRIBUTION OF MYOCARDIAL BLOOD
 FLOW DURING ACUTE ISCHEMIA BY INTRAAORTIC BALLOON
 PUMPING 445
*Carl C. Gill, M.D., Andrew S. Wechsler, M.D., Glenn E. Newman, M.D., and
 H. Newland Oldham, Jr., M.D.*
- BLALOCK-TAUSSIG SHUNTS IN THE INFANT 454
William C. Wood, M.D., Carolyn M. McCue, M.D., and Richard R. Lower, M.D.
- TOWARD A RATIONAL OPERATION FOR TRANSPOSITION
 OF THE GREAT ARTERIES 458
C. E. Anagnostopoulos, M.D., C. L. Athanasuleas, A.B., and R. A. Arcilla, M.D.

Contents of Volume 16, July-December, 1973

MIXED TYPE OF TOTAL ANOMALOUS PULMONARY VENOUS DRAINAGE: SURGICAL CORRECTION IN 3 INFANTS	464
<i>M. de Leval, J. Stark, M.D., and D. J. Waterston, M.D.</i>	
A COMPARATIVE STUDY OF THE DIRECT INTERNAL MAMMARY-TO-CORONARY ARTERY ANASTOMOSIS AND THE AORTOCORONARY VEIN BYPASS GRAFT	471
<i>Teruo Hirose, M.D., and Donald Marshall</i>	
THE STONE HEART: DEVELOPMENT OF A CANINE MODEL WITH ULTRASTRUCTURAL SURVEY AND METABOLIC MANIPULATION	480
<i>Raymond G. Armstrong, Col, William Stanford, Col, Robert E. Cline, Lt Col, and James Guillebeau, Col, all MC, USAF</i>	
FUNCTIONAL REHABILITATION AFTER CARDIAC VALVE SURGERY	492
<i>Joseph S. Carey, M.D., Richard K. Hughes, M.D., William G. Plested, M.D., Cleo B. Nelson, R.R.L., Elliot Sacks, B.S., and Howard Salvay, B.S.</i>	

How to Do It

A CONTINUOUS SUTURE TECHNIQUE FOR MITRAL VALVE REPLACEMENT	505
<i>Robert L. Berger, M.D., and Virender K. Saini, M.D.</i>	
A CONVENIENT CANNULATION TECHNIQUE FOR TRANSPOSITION SURGERY	509
<i>Benson R. Wilcox, M.D.</i>	

Case Reports

TOTAL RIGHT ANOMALOUS PULMONARY VENOUS CONNECTION: FUNCTIONAL AND SURGICAL CONSIDERATIONS	512
<i>J. S. Wright, F.R.A.C.S., R. M. McCredie, M.R.C.P., and T. A. Torda, F.F.A.R.C.S.</i>	
SINGLE (LEFT) SUPERIOR VENA CAVA DRAINING INTO THE LEFT ATRIUM: SURGICAL REPAIR	518
<i>Sami S. Kabbani, M.D., Mark Feldman, M.D., Paolo Angelini, M.D., Robert D. Leachman, M.D., and Denton A. Cooley, M.D.</i>	
DIROFILARIA IMMITIS: A CAUSE OF PULMONARY COIN LESIONS IN HUMAN BEINGS	526
<i>G. L. Hendricks, Jr., M.D., W. T. Barnes, M.D., and David S. Lerman, M.D.</i>	
"BENIGN" GIANT CELL TUMOR OF BONE METASTASIZING TO LUNG: REPORT OF A CASE	531
<i>Arthur A. Gresen, M.D., David C. Dahlin, M.D., Lowell F. A. Peterson, M.D., and W. Spencer Payne, M.D.</i>	

Note

- AN IMPROVED CHEST DRESSING 536
Vincent L. Hennessy, Jr., M.D., and Daniel J. Ulliot, M.D.

Editorial

- ABOUT FLEXIBLE FIBEROPTIC BRONCHOSCOPY 538
John R. Benfield, M.D.

Announcements

- EIGHTH POSTGRADUATE PROGRAM, 541
 THE SOCIETY OF THORACIC SURGEONS
 PROGRAM FOR THE TENTH ANNUAL MEETING OF 543
 THE SOCIETY OF THORACIC SURGEONS

Number 6: December 1973

Original Articles

- PARAESOPHAGEAL HERNIA: A LIFE-THREATENING DISEASE 547
I. Ayhan Ozdemir, M.D., William A. Burke, M.D., and Phillip M. Ikins, M.D.
- TRACHEAL OBSTRUCTION 555
*Safuh Attar, M.D., John Hankins, M.D., Stephen Turney, M.D., G. Robert Mason, M.D.,
 Ralph Ramirez, M.D., and Joseph McLaughlin, M.D.*
- PULMONARY CONTUSION: PATHOGENESIS AND EFFECT OF VARIOUS 568
 RESUSCITATIVE MEASURES
*J. Kent Trinkle, M.D., Richard W. Furman, M.D., Michael A. Hinshaw, M.D.,
 Lester R. Bryant, M.D., and Ward O. Griffen, M.D.*
- THE EFFECT OF ACUTE AUTONOMIC DENERVATION ON 574
 PULMONARY VASCULAR RESISTANCE
Narayan V. Nimbkar, M.D., and Thomas J. E. O'Neill, M.D.
- HYPOTHERMIC PERFUSION PRESERVATION OF THE ISOLATED 583
 DOG LUNG
*Dennis L. Modry, M.D., Dennis W. Jirsch, M.D., Gene Boehme, M.D.,
 Tom Overton, Ph.D., R. Leighton Fisk, M.D., and Cecil M. Couves, M.D.*

**SURGICAL MANAGEMENT OF VENTRICULAR SEPTAL DEFECTS AND
MITRAL REGURGITATION COMPLICATING ACUTE
MYOCARDIAL INFARCTION** 598

*Mortimer J. Buckley, M.D., Eldred D. Mundth, M.D., Willard M. Daggett, M.D.,
Herman K. Gold, M.D., Robert C. Leinbach, M.D., and W. Gerald Austen, M.D.*

Case Reports

**STRUT FRACTURE: A LATE COMPLICATION OF BEALL MITRAL
VALVE REPLACEMENT** 610

Martin J. Nathan, M.D.

**SYSTEMIC EMBOLI DUE TO CLOTH WEAR IN A STARR-EDWARDS
MODEL 2320 AORTIC PROSTHESIS** 614

*Fred A. Crawford, M.D., Gulshan K. Sethi, M.D., Stewart M. Scott, M.D., and
Timothy Takaro, M.D.*

PRIMARY PAPILLOMA OF THE TRACHEA 620

Theodore D. Aylward, M.D., and John B. Flege, Jr., M.D.

POLYALVEOLAR LOBE CAUSING LOBAR EMPHYSEMA OF INFANCY 624

Edward R. Munnell, M.D., Perry A. Lambird, M.D., and R. Lee Austin, M.D.

How to Do It

**AN IMPROVED METHOD FOR REPAIR OF PECTUS CHEST
DEFORMITIES** 629

John P. Shannon, M.D., and Charles H. Sparks, M.D.

CAROTID ENDARTERECTOMY 635

Richard K. Hughes, M.D.

Collective Review

CAROTID BODY RESECTION: CONTROVERSY—CONFUSION—CONFLICT 648

Benjamin Winter, M.D.

Review of Recent Books 660

Indexes to Volume 16

AUTHOR INDEX 661

SUBJECT INDEX 664

Notice from the Editor and the Editorial Board 573

98

10

14

20

24

29

35

48

60

61

64

73